



# Flood Lines

Spring 2019

Volume XII Issue 2

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## Using LiDAR-Derived Data in Support of Letter of Map Amendment (LOMA) Applications

Last year, FEMA announced that the use of LiDAR-derived topographic data (see box below) is now acceptable to use for certain Letter of Map Amendment (LOMA) applications instead of field-surveyed elevations. OSI will be developing NH-specific guidance related to using LiDAR-derived data for LOMA applications. In the meantime, here are a few things to know:

- LiDAR-derived data cannot be used for applications for buildings or lots:
  - elevated using fill
  - in the regulatory floodway on the FEMA flood maps
  - in Zone AO on the FEMA flood maps
- LiDAR LOMA applications can only be submitted to FEMA by community officials, licensed surveyors, or professional engineers.
- LiDAR LOMA applications cannot be submitted using the eLOMA application.
- LiDAR-derived topographic data that meets FEMA quality requirements is currently available throughout much of the state. OSI is working to confirm which specific areas have data that meet those requirements.

More details are available in [this fact sheet](#) and Section 5 of [FEMA’s MT-1 guidance](#). You can also contact the [FEMA Map Information eXchange](#) for answers to specific questions about the process. And again, stay tuned for more information from OSI on this topic.

### What is LiDAR?

*LiDAR stands for Light Detection and Ranging. It is a method that uses light in the form of a pulsed laser to measure variable distances to the Earth. These light pulses, which are often gathered using specially-equipped aircraft, generate precise, 3D information about the shape of the Earth and its surface characteristics. The results are used to create highly detailed topographic data sets. [NH GRANIT](#), the State’s GIS clearinghouse has LiDAR-derived topographic datasets for much of the state available online and for download.*

# NFIP Nationwide Programmatic Environmental Impact Statement: Changes Will Affect NFIP Communities, Guidance Under Development

Last month, every NFIP community in the country received a letter from FEMA about what is called the NFIP [National Programmatic Environmental Impact Statement](#) (NPEIS). The NPEIS identified ways that certain NFIP processes must be changed in order for the program to comply with the Endangered Species Act (ESA) and to implement requirements of the Biggert-Waters Flood Insurance Reform Act of 2012 and the Homeowner Flood Insurance Affordability Act of 2014.

The letter to communities outlined five changes, including several directly related to flood insurance that have either already been, or are in the process of being, implemented. Two other (yet un-implemented) changes relate to compliance with the ESA: specifically that 1) NFIP communities must obtain documentation of compliance with the ESA as a condition of issuing floodplain development permits and 2) the issuance of certain Letters of Map Change (i.e., map revisions) is contingent on the community or applicant submitting documentation of compliance with the ESA.

FEMA is currently developing a process and policies for implementing the ESA-related changes above, in coordination with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. As such, NFIP communities are not required to implement these changes at this time. FEMA will be performing more outreach and providing further guidance to communities on how the changes will affect them at a later date.

We'll continue to keep you posted as we receive more information from FEMA.



## Publication Spotlight: FEMA Technical Bulletin 2, Flood Damage-Resistant Materials Requirements

*Here we highlight publications that may not be brand new but still are great resources with important information for floodplain managers and others.*

Your community's floodplain management regulations contain language to the following effect:

**All development located in a Special Flood Hazard Area (SFHA) shall be constructed with flood damage-resistant materials.**

Okay...pop quiz everyone: Polyester-epoxy is an acceptable flood damage-resistant wall finish for a wood structural wall. True or False?

Of course everyone knows that is false, but let's say you *didn't* know that. Where can you turn? Check out FEMA's [Technical Bulletin 2](#) which is devoted entirely to the subject of flood damage-resistant materials! It also includes construction examples for different flood zones.

Check out this publication today [online](#) or [order a free hard copy from FEMA](#) today. You may want to order a few extra copies that you can provide to property owners planning to build in the SFHA!



### Flood Damage-Resistant Materials Requirements

for Buildings Located in Special Flood Hazard Areas in accordance with the National Flood Insurance Program

Technical Bulletin 2 / August 2008



# New Hampshire Flood Mapping Update

The following is an update on the current status of NFIP flood mapping activities in New Hampshire based on information provided by FEMA:

**Coastal Mapping Project: Rockingham County** - FEMA is moving forward with finalizing preliminary flood maps issued in 2014 and 2016. It is expected the maps will become effective in late 2019.

**Contoocook/Pemigewasset Watersheds** - A Discovery project to determine flood map update needs in the watersheds is underway with FEMA currently finalizing a project scope for map updates. Field surveys for updated flood analyses included in the project scope are expected to be performed from Spring to Fall 2019.

**Coos County Mapping Project** - Zone A floodplain boundaries are being updated and Zone AE areas redelineated based on more recent/detailed topographic data. Updates will be incorporated into the flood maps at a later date.

**Merrimack River Watershed** - The development of revised flood maps based on updated engineering analyses and topographic information is currently underway. Work maps are expected to be ready for review by community officials in Summer 2019 followed by issuance of preliminary flood maps.

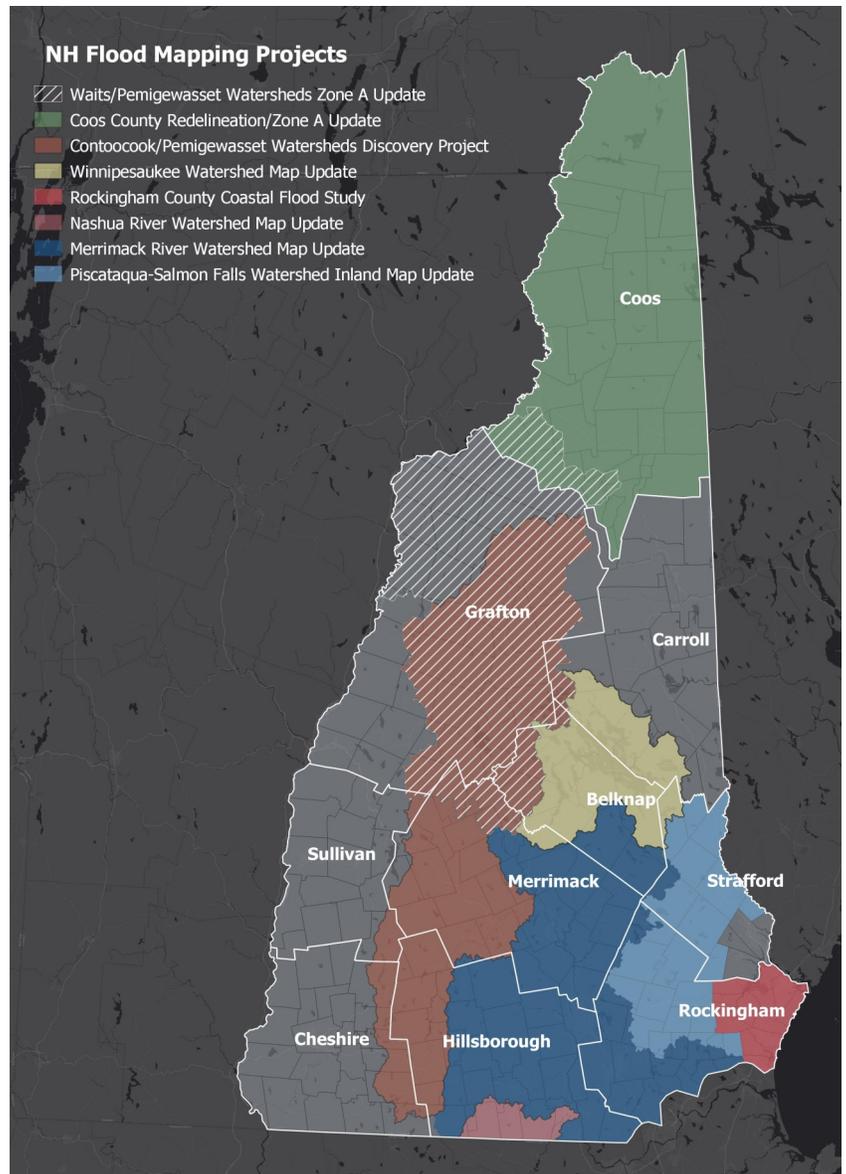
**Nashua River Watershed** - Updated flood analyses are expected to be completed in Spring 2019. Updated maps based on the analyses and new topographic information will be developed once that work is complete and are expected to be released in 2020.

**Salmon Falls—Piscataqua Rivers Watershed (Outside coastal area)** - Preliminary flood maps showing revised flood hazard information based on new engineering analyses and topographic information are currently being prepared and are expected to be issued in late Spring or early Summer 2019.

**Waits/Pemigewasset Watersheds** - Zone A floodplain boundaries have been updated using more recent/detailed topographic data and new engineering analyses. These updates will be incorporated into the flood maps at a later date.

**Winnepesaukee River Watershed** - Updated flood analyses are currently being performed which, along with new topographic data, will be used to create digital flood maps.

For the latest information on FEMA flood mapping projects in New Hampshire, please visit OSI's [Current NH Floodplain Mapping Activities webpage](#). You can also view our interactive map showing project locations [here](#).



# Recent and Upcoming Changes to the NFIP

## NFIP Changes Going into Effect on October 1, 2019

FEMA recently announced NFIP changes that will go into effect on October 1, 2019. These changes include the collection of insurance agent and agency information for all new business transactions and the update of rating procedures for certain properties that previously required submission to FEMA for rating. Get the details in FEMA's [April 1, 2019 memo to Write Your Own \(WYO\) coordinators](#).



## NFIP Reauthorization — Still Waiting!

In order for the NFIP to continue to operate, the program was required to be reauthorized by Congress by September 30, 2017. After multiple short term authorizations occurring since that deadline, on December 21, the President signed legislation passed by Congress authorizing the program until May 31, 2019. Congress has remained deadlocked on moving forward with a number of bills proposing long-term reform of the NFIP as a program since last year. FEMA's [NFIP Reauthorization webpage](#) provides the latest on the status of the reauthorization.

## Risk Rating 2.0: Update

In a past issue of this newsletter, we mentioned that FEMA was in the process of restructuring how NFIP flood insurance is underwritten and how policies are issued as part of a project called "Risk Rating 2.0." The planned changes are intended to:

- make flood insurance rates simpler and more transparent
- reflect more types of flood risk
- reflect the cost to rebuild
- increase understanding of flood risk through intuitive rating variables
- reinforce the financial framework of the NFIP

FEMA has now indicated that the new rates will be released for single-family homes nationwide on April 1, 2020 with those rates going into effect on October 1, 2020. We'll keep you posted as more information becomes available!

The OSI Floodplain Management Team will be exhibiting at the [NH Emergency Preparedness Conference](#) this year in Manchester on June 4th so stop by and say 'Hi' if you'll be there too! This annual conference is a free event organized by the NH Department of Health and Human Services and the NH Department of Safety. The focus this year is on disaster mitigation so consider attending! As an added incentive, we'll have a few highly coveted and prestigious NFIP water bottles on hand and perhaps a few other nifty giveaways for folks who swing by our booth!



# Community Rating System (CRS) Update

## Coming this Summer: CRS Training Course in Concord

FEMA is offering a free two-day course about CRS on August 13-14 in Concord. Get the details on page 7!

## Upcoming CRS Webinars

Below are upcoming, free CRS webinars, which all begin at 1 pm. Many of the courses are eligible for CECs for Certified Floodplain Managers (CFMs). To register, visit the [NFIP Training website](#) and click the “Upcoming” tab. When asked during registration which FEMA Region you are in, reply “1”.

- Credit for Drainage System Maintenance—Activity 540 (June 18)
- Preparing for an Annual Recertification (June 19)

*Did you know that whether or not a community participates in CRS is now factored into the scoring for FEMA Hazard Mitigation Assistance grant applications by the State Interagency Hazard Mitigation Team that reviews community project submittals? Another reason to consider joining the program!*

## GIS Resources For Floodplain Managers: Web Map Services (WMS)

Let’s talk about **Web Map Services (WMS)**! What is a WMS? Put simply, it is an online version of a geospatial dataset. So instead of downloading a shapefile and adding it to your GIS interface (ArcMap, QGIS, etc.), you use a web URL to access the data.

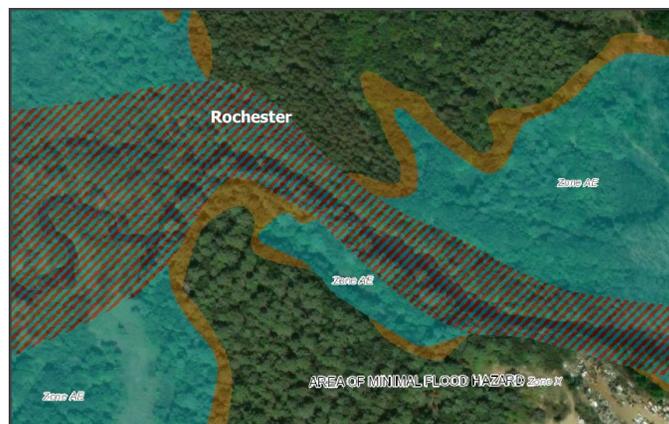
WMS are a good thing since the services are refreshed automatically whenever there is a data update. That means once you’ve established your WMS connection, you will always have the most current version of the data available. WMS datasets are online so you do need an Internet connection to view them but that also means you won’t have a bunch of large shapefiles or geodatabase files eating up space on your hard drive or network.

There are many different WMS available through Federal, State, and other sources. FEMA’s [National Flood Hazard Layer \(NFHL\)](#) which includes all digital flood map data in the country\* is available as a WMS. [NH GRANIT](#), the state GIS clearinghouse, has [WMS for imagery and topographic data](#).

It’s easy to use WMS! if you have ArcGIS software you can follow [these directions](#) to connect to a service. For QGIS users, see below for how to add NFHL WMS data:

1. Open QGIS. Right click on ‘ArcGisMapServer’ in the QGIS Browser window and select ‘New Connection’.
2. In the next window, name your connection (say, ‘FEMA NFHL’) and then enter the URL of the NFHL map service which is: <https://hazards.fema.gov/gis/nfhl/rest/services/public/NFHL/MapServer>. Click ‘OK’.
3. You’ll see your map service connection under ‘ArcGisMapServer’ in the Browser window. Click the arrow next to the connection name to see the different data layers. Double click on a layer to add to your map.

For NH GRANIT services, perform the same steps as above, but right click on WMS/WMTS instead of ArcGisMapServer in Step 1. The ArcGisMapServer option only applies for services that contain the word ‘rest’.



*The NFHL web map service visualized through QGIS.*

## New Publications and Resources Available!

- ◆ [FloodSmart Cost of Flooding Tool](#) FEMA's FloodSmart team has developed a new and improved Cost of Flooding Tool to help people see how much flood damage—even from just a few inches of water—could cost them. This tool can be embedded into your own webpage.
- ◆ [Using LiDAR for Map Amendments](#) Did you know FEMA now accepts LiDAR data (i.e., high resolution topographic data) in support of certain types of Letters of Map Amendment (LOMAs)? This fact sheet provides some details. See also the front page of this newsletter for more information.
- ◆ [Second-Story Conversion: Elevation Project Design Considerations for Hazard Mitigation Assistance Applicants](#) This FEMA fact sheet clarifies design standards needed for elevated buildings mitigated using FEMA Hazard Mitigation Assistance grant funds in order to be eligible for flood insurance premium reductions.
- ◆ [Updates to NFIP Technical Bulletins](#) This FEMA fact sheet provides information about upcoming updates to FEMA's [NFIP Technical Bulletin series](#).
- ◆ [NFIP Resource Library](#) FEMA FloodSmart's digital library includes videos, post-disaster photography, customizable post cards, and ready-to-use fact sheets that can help tell the story of flood risk. These resources are available for use by community officials, insurance agents, and others for posting via social media outlets, in marketing emails, on websites, and beyond.
- ◆ [Flood Hazard Mapping Updates Fact Sheet](#) This FEMA fact sheet provides general information about the different types of FEMA flood hazard mapping updates, including physical map revisions, Letters of Map Revision (LOMRs), and Letters of Map Amendment (LOMAs).
- ◆ [Moving the Needle on Closing the Flood Insurance Gap](#) This report from the Wharton Risk Management and Decision Processes Center evaluates different options for increasing the number of people who buy flood insurance policies in the U.S., particularly people with low and moderate income.
- ◆ [National Inventory of Dams](#) The National Inventory of Dams is a Congressionally-authorized database documenting dams in the U.S. It is maintained and published by the U.S. Army Corps of Engineers in collaboration with FEMA. The inventory is updated annually and is now publicly accessible. Users can search for information about a specific dam or find all dams located in a particular county or at a particular hazard level.
- ◆ [Federal Flood Risk Management Programs Website](#) The U.S. Army Corps of Engineers, in coordination with other Federal agencies, recently launched the beta version of the Federal Flood Risk Management Programs website. Users can search among Federal flood risk-related programs available through 11 agencies to find those most relevant to their needs. Search results provide summaries of programs and links to additional information. The development team is interested in feedback on this beta version of the website.
- ◆ [FEMA 2017 National Household Survey Results](#) Every year, FEMA surveys the American public to find out how prepared they are for disasters. The National Household Survey (NHS) also looks at opinions and experiences which cause people to take steps to become more prepared. 2017 NHS results are presented in this recently released report from FEMA.



## **Surveying in Floodplains Workshop**

**May 31, 2019, 9:30 am to 4:00 pm, Portsmouth, NH**



**University of  
New Hampshire**

Professional Development & Training

This workshop is part of the UNH Professional Development & Training program and is co-sponsored by UNH, the New Hampshire Land Surveyors Association, and OSI. It provides a general overview of floodplain management and the NFIP. You will receive guidance and helpful tips about how to review and use flood maps and complete Elevation Certificates, and learn how to apply to revise or amend the maps, comply with NFIP floodplain regulations, and minimize the cost of flood insurance. To learn more and to register, visit the [UNH website](#). Lunch is included and CECs are available for surveyors.

## **FEMA 2-Day Introduction to the Community Rating System (CRS) Training Course**

**August 13 - 14, 2019, 8:30 am to 5:00 pm, Concord, NH**

FEMA is offering a free 2-day training course (L0278) about the Community Rating System (CRS). Whether your community is already participating in CRS or is potentially interested in joining the program, this course is a great opportunity to dive into the basics of the program! To register, please contact Samara Ebinger at OSI at [samara.ebinger@osi.nh.gov](mailto:samara.ebinger@osi.nh.gov) or 603-271-1755. 12 Certified Floodplain Manager (CFM) CECs are available for attending this course.

## **NFIP Online Training Webinars**

Free, online NFIP-related training is available through FEMA's contractor, STARR II. Many of the courses are eligible for CECs for Certified Floodplain Managers (CFMs). Be sure to check the website periodically as new webinars are always being added. To learn more about these webinars and to register, visit the [NFIP Training website](#) and click the "Upcoming" tab. When asked during registration what FEMA Region you are in, please reply "1". Upcoming webinars include:

- NFIP Basics (April 25, 1-2 pm)
- Elevation Certificates (May 16, 1-3:30 pm)
- Floodplain Development Permit Review (May 30, 12-1 pm)

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